60. *Of the Capsulo-Lenticular Reclination, or New Method of Depressing Cataract with a New Needle.* By M. Bergeon, Interne of the Hospital Saint Antoine, and Doctor of Medicine.—The frequency of secondary cataract is not questioned; a great service would therefore be rendered to science, by pointing out a method of operating calculated to prevent this unfortunate accident. This was the principal end which I proposed to myself; but I was also desirous of finding a method, which by its excellence and facility would bring to a close the interminable debate concerning extraction and depression. With this view I found it necessary, I will not say to invent a new instrument, but to modify considerably one of those employed by the partisans of depression. My task will doubtless seem very difficult to perform; consequently I shall esteem myself fortunate if I merely approach the end which I desire to obtain, since my efforts will then not have proved entirely fruitless.

To describe the instrument with which I operate, and the method which I employ, to point out the advantages which it seems to possess over those hitherto made use of, and to declare frankly the inconveniences to which it may be exposed, is the course which I intend to pursue in the following dissertation. The needle which I employ, and to which I give the name of *reclinator*, is of the same length as those commonly employed; it is composed of a blade having two surfaces, one convex, anterior, (with respect to the person operated upon,) or iridian; the other concave, posterior, or crystalline, (for I give notice that I shall employ these terms indiscriminately.) The convexity of the anterior or iridian surface, is formed by the reünion of two planes which form a rounded angle along the median line. The posterior surface is concave only in its longitudinal diameter, which is four lines; transversely it is perfectly flat, and differs in this respect considerably from the needle of Scarpa, which presents a bold angle or ridge in this direction; and from that of M. Dupuytren, which also presents a projection in the same direction, less pronounced however than in the needle of the Pavian professor. The transverse diameter of this surface is a line and a half; its concavity is such as to correspond exactly with the convexity of the crystalline lens. The point of the needle, instead of tapering off very finely, like that of M. Dupuytren, on the contrary terminates rather abruptly. The general form of this little blade is that of an oval, a little prolonged, and curved upon itself. The two edges may be distinguished into superior and inferior; the former should be a complete cutting edge throughout its length; the latter for the first half only, starting from the point; this last disposition is made with a view to prevent a lesion of the iris, as will be hereafter observed. The two edges of the blade terminate towards the handle in a narrow portion called the *neck*, beyond which is found a bluish mark two lines in length, which is of great advantage in making known to what extent the reclinator may be plunged in the ocular globe. It is the same object which Graefe wished to attain, by adding to his needle a little transverse bar; but is not the defect of such an expedient immediately obvious? The metallic stem which supports the extremity of the needle is an inch or an inch and a quarter in length. The handle into which the stem is introduced is of the length of the common needles; it has four surfaces or planes; one corresponds with the crystalline surface; it is traversed throughout its whole length by two little parallel lines, which are black if the handle be ivory, and white if it be made of ebony. Upon the plane which corresponds with the iridian face of the needle, are three rounded marks, equally separated from each other; the two planes of the handle which corresponds with the edges of the blade, have no particular mark, and may thus be easily distinguished.

I have already said that, in my process, it was my aim to remove as completely as possible, not only the crystalline in totality, but also the entire capsule, and to repel them unbroken, into a part of the eye, where they could no longer prove an obstruction to vision. If I attain this end, it must be acknowledged that I will have found the solution of a very difficult problem, and one which has been proposed by the illustrious Scarpa in his work upon the

Diseases of the Eye. He thus expresses himself, (5th edit.) "that which most generally opposes itself to the complete success of the operation for cataract, whatever method is employed, is not the crystalline lens, notwithstanding its density, more or less considerable, but the capsule of the affected lens, and more particularly the anterior convexity of the capsule. It would be very desirable to find an easy and efficacious method which would permit the surgeon, in the various modes of operating for cataract, to separate accurately, at the same time with the opaque crystalline, the entire capsule of the lens from the ciliary zone to which it is attached, as is sometimes accomplished by a happy and unforeseen accident."

It is precisely this last indication which I wish to fulfil by my process. I am well aware that certain partisans of depression aim at the same end; we shall soon see in what manner they endeavoured to attain it, and above all whether they have succeeded: I will afterwards expose my ideas with regard to this matter; but in order that I may be better understood, it is indispensable to recall in a few words, the manner in which the crystalline lens and its membrane are fixed in the eye; and that I may not be accused of partiality or exaggeration in the description, I will copy literally an anatomist who is an honour to the present school, and whose authority no one will question, viz. M. Jules Cloquet, who says,* "from the interval of the ciliary processes, and from the surface even of their anterior extremities, are detached innumerable small rounded filaments, transparent, united in bundles, which I think I was the first to point out, and which are directed towards the circumference of the lens, in order to attach themselves to its membrane, which they thus fix in a solid manner. These filaments expand, some upon the anterior surface of the capsule, the other upon its posterior face, but do not extend more than a line beyond its circumference. It is impossible to see them on account of their extreme tenuity, and their transparency, without having macerated the eye, (opened,) in a solution of gallate of iron; it is then only that their disposition can be studied. They form, as it were, so many little tendons, which keep the capsule and the lens in place. Much more visible in certain animals than in man, those filaments have been improperly regarded as the anterior lamina of the hyaloid membrane, to which they adhere posteriorly alone, at the point where they detach themselves from the ciliary circle. It is these which form the anterior paries of the pretended canal of Petit."

Method of Operating.—The patient having been properly prepared, and the pupil previously dilated by the extract of belladonna or of hyosciamus, he must be laid in a bed placed opposite a window, but so disposed that the light may fall a little obliquely upon the cornea. The head must be elevated by a bolster and two pillows; the arms placed under the bed-clothes will be easily retained by them. An assistant must stand behind the head of the bed, the head-piece of which should be but little raised; he must place one hand behind the neck of the patient, while with the other he raises the upper eyelid; by this means the head and the lid will be permanently fixed. The surgeon seated upon the side of the bed opposite to that of the eye to be operated upon, will find in the position of the patient, a point d'appui, the more convenient because it will be in his power to select it when he pleases. The eye of the patient being turned upwards and inwards, the needle must be held like a writing pen, with the right hand, (if the left eye is to be operated upon, et vice versa;) then the two last fingers resting upon the temple, and the needle directed transversely, so that its convex surface is superior; the surgeon must carry it two lines and a half behind the transparent cornea, and one line below the transverse diameter of the eye; by a quick movement he must then introduce the whole blade of the needle behind the lens, stopping however at the *neck* of the instrument, the advantage of which at this stage of the operation is easily comprehended. All the precautions which I have just indicated must be taken, that the long ciliary artery may not be wounded. At the moment when the point of the needle touches the sclerotica, the extremity of the handle should be pretty low; but it is necessary to elevate it gradually, as the blade penetrates into the interior of the eye.

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* Manual of Anatomy.

Before proceeding to the second stage of the operation, the handle of the needle is to be lightly turned in the fingers, so that the pointed surface from being superior becomes inferior. The needle occupies then the same position behind the lens which it is soon to occupy before that body. In order to accomplish this second stage, the blade must be depressed by elevating the handle; the superior edge of which alone is cutting its whole extent, is to be gradually directed forward, and must be carried gently under the capsule; it will thus embrace all the inferior and half of the exterior ligaments; it is to be raised afterwards by passing it before the lens and its capsule. However transparent this latter may be, it will be always easy with a little attention to recognise whether the needle is before or within it. Let us suppose first the most fortunate case. The operator will cut all the internal ligaments of the capsule with the point of the blade, he will then carry the superior cutting edge against the superior ligaments, and the remaining half of the exterior ones; then the needle being brought behind the pupil, and in a direction somewhat oblique, he will proceed to the third and last stage, viz. the reclination of the lens and its capsule entire. To accomplish this, the lens must be thrown backwards, downwards, and a little outwards, by carrying the handle of the needle upwards and outwards. This last stage of the operation is so easy, that the promptitude with which it is performed sometimes causes surprise. The crystalline must be maintained thus depressed some moments, in order that the vitreous humour may enclose it, and prevent it from rising again; to obtain greater security, the handle may even be gently turned in the fingers, so that the pointed surface may become inferior, and the linear surface be placed above.

It is apparent, that by this means it becomes very easy to bear upon the crystalline with the convex surface of the needle, even when it might not be distinguishable at the bottom of the eye, and there is no occasion to fear wounding the retina and the choroïd coat with its point. I will suppose now, that in causing the needle to pass under the crystalline, and bringing it behind the iris, the operator penetrates between the lens and its capsule, instead of endeavouring to recommence this stage of the operation, which would not fail to irritate the iris, it is better to carry the point of the *reclinator* through the capsule, by directing the extremity of the handle strongly towards the temple of the patient. Being seized thus, the crystallized is torn throughout the greatest part of its extent, and is carried away with the crystalline. When the needle is to be retracted from the ocular globe, its linear surface is turned upward, and the extremity of the handle must be gradually raised; on the contrary it must be depressed by degrees, when the pointed surface or face is in that direction. It will be seen, that hitherto in the operative procedure, I have considered merely the first variety of the first species of cataract, viz. that in which the crystalline is hard. I should examine now the case in which it is soft, or that in which it is diffluent; and finally, those in which it is capsular or mixed; but as my method is applicable to all of these cases, I shall say nothing particular concerning them, reserving to myself an occasion to say a word in relation to them, in speaking of the numerous advantages which I attribute to my reclinating needle, (aiguille-reclinateur.)

The advantages of this method are, according to the author, the following:—

1. The operation is easier than by the other methods.
2. It is more effectual.

M. Bergeon afterwards passes in review the action of the needles in the different species of cataract, and finds that the utility of his instrument is principally obvious in soft, liquid, or milky cataracts, capsular or capsulo-lenticular ones, &c. He undertakes afterwards to combat the objections which might be brought against his procedure, the only one which seems to him to have any foundation is this, that in gliding over the iris, in touching the ciliary bodies in certain points, an internal inflammation of the ocular globe might be produced; but the other methods are not exempt from these reproaches.—*La Lancette Française, Oct. 1st,* 1833.

SURGERY.

61. *New Method of Extracting the Stone from the Bladder, by a Perinæal Incision.*—Dr. Mariano Pantaleo, the author of this method, remarks that the lateral operation is the one which has united the suffrages of the greater number of physicians, and that the only valid objection which can be made against it is, that it does not give a ready passage to large calculi. This inconvenience the author proposes to remedy by making a double incision of the prostate gland, but not after the method of MM. Dupuytren and Senn. Thus the left moiety of the incision regards the ascending branch of the ischium, as in the common lithotomy, while the other half is directed obliquely upwards, and to the right side.

According to Dr. Pantaleo, it is the superior portion of the prostate gland which offers the greatest resistance to the dilatation of the neck of the bladder wherever the incision is made low down; hence the most rational method is that by which this obstacle is overcome, and it was by following this principle that Martineau, according to the author, obtained his brilliant success.

The bilateral operation, as proposed by M. Dupuytren, has the advantage of giving passage to very large calculi, but is attended with some inconveniences; thus it exposes us to divide the bulb of the urethra, which is so much developed in old subjects, and particularly in calculous patients; or if we approach the incision too close to the anus, in order to avoid it, we run the greater risk of dividing the intestine. The incision of Beclard avoids the bulb, but it is too near the rectum, and not being parallel to the external incision, gives rise to the danger of an infiltration of urine.

Finally, the two incisions practised laterally by M. Dupuytren, leave the superior portion of the prostate gland untouched, and others do not remove the obstacle which has been noticed to the dilatation of the neck of the bladder.

The author's instrument is a double lithotome caché, the blades of which separate opposite one another, and to the usual extent. He makes an incision in the ordinary manner along the left side of the perinæum, opens the membranous portion of the urethra, and introduces the lithotome along the sound into the bladder. Having estimated the volume of the calculus, the blades of the lithotome are now opened to the proper size, the handle so fixed that the internal incision shall be exactly parallel to the external one, and the instrument is drawn outwards; hence results an inferior incision on the left side of the prostate, and a superior one on the right, or, in other words, the gland is divided by an oblique diameter, running upwards, and from left to right; this, according to the author, gives the most favourably disposed wound for the extraction of a stone; it is very regular, parallel to that of the integuments, and readily dilated.—*Lancet, July 12th,* 1834.

62. *Treatment of Club-foot, by Dividing the Tendo-achillis; a new Operation.* By Dr. Louis Stromeyer.—A division of the tendo-archilles has only been proposed in cases of amputation of the foot, by the method of Chopart, after which operation the foot is apt to be drawn backwards by the muscles on the back of the leg, predominating over those left upon the front part. This operation was received at first but coolly, and as cases suitable for its application were of very rare occurrence, it had fallen into complete neglect, when it was revived by Delpech for the relief of those cases of club-foot, termed *pied équin* where the heel is drawn forcibly backwards. It is based upon the important fact,